Exercise-1

QUE A: Write the register values (for R2-R9) and verify the values after execution

```
        AREA reset, DATA, READONLY
        EXPORT __Vectors
__Vectors
        DCD 0x10001000
        DCD Reset_Handler
        ALIGN
        AREA mycode, CODE, READONLY
        EXPORT Reset_Handler
        ENTRY
Reset_Handler
        LDR R0, =SRC
        LDR R1, =SRC1
        LDR R2, [R0]
        LDR R3, [R1]
        LDR R4, [R0,#4]
        LDR R5, [R1,#8]
        LDR R6, [R0],#4
        LDR R7, [R1],#8
        LDR R8, [R0]
        LDR R9, [R1]
STOP
        B STOP
SRC DCD 0x1234, 0x12345678, 0x23456789, 0x00011100
SRC1 DCD 0x234594, 0x14567812, 0x45678912, 0x20011100
        END
```

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QUE B: State the contents of RAM locations 0x10000092 to 0x10000096 after the following program is executed

```
        AREA reset, DATA, READONLY
        EXPORT __Vectors
__Vectors
        DCD 0x10001000
        DCD Reset_Handler
        ALIGN
        AREA mycode, CODE, READONLY
        EXPORT Reset_Handler
        ENTRY
Reset_Handler
        MOV R1,#0x99
        LDR R6,=0x10000092
        STRB R1,[R6]
        ADD R6,R6,#1
        LDR R1,=0x85
        STRB R1,[R6]
        ADD R6,R6,#1
```

```
        MOV R1,#0x3F
        STRB R1,[R6]
        ADD R6,R6,#1
        MOV R1,#0x63
        STRB R1,[R6]
        ADD R6,R6,#1
        MOV R1,#0x12
        STRB R1,[R6]
STOP
        B STOP
        END
```

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Que C: State the contents of R2, R1, and memory location 0x10000020 after the following program

```
        AREA reset, DATA, READONLY
        EXPORT __Vectors
__Vectors
        DCD 0x10001000
        DCD Reset_Handler
        ALIGN
        AREA mycode, CODE, READONLY
        EXPORT Reset_Handler
        ENTRY
Reset_Handler
        MOV R2,#0x5
        MOV R1,#0x2
        ADD R2, R1,R2
        ADD R2,R1,R2
        LDR R5,=0x10000020
        STRB R2,[R5]
STOP
        B STOP
        END
```

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Que D: State the contents of R2, R1, and memory location 0x10000020 and 0x10000030-33 after the following program:

```
        AREA reset, DATA, READONLY
        EXPORT __Vectors
__Vectors
        DCD 0x10001000
        DCD Reset_Handler
        ALIGN
        AREA mycode, CODE, READONLY
        EXPORT Reset_Handler
        ENTRY
Reset_Handler
        LDR R1, =0x23456005
```

```
        LDR R2, =0x00000002
        ADD R2, R1,R2
        ADD R2,R1,R2
        LDR R5,=0x10000020
        STRB R2,[R5]
        LDR R6,=0x10000030
        STR R2,[R6]
STOP
        B STOP
        END
```

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